



## **Future changes of the storm surge climate in the Northern Adriatic Sea**

**P.Lionello** (1), S.De Zolt (2), E.Elvini (3)

(1) University of Lecce ,Italy, (2) ARPA-Veneto, Italy, (3) University of Padua, Italy

The low northern coast of the Adriatic Sea is a densely populated area extremely vulnerable to sea level rise and change of intensity of the storm surge events. This study describes the change of storm surge regimes in the A2 and B2 scenarios with respect to the present climate. The storm surge simulations are carried out with a barotropic model (called Hypseam) using the sea level pressure and surface wind fields computed by the RegCM model at ICTP in Trieste. Results suggest a lower frequency, but higher extreme values of storm surge events in future climate scenarios, showing a possible change in the frequency distribution of surge levels. Results are discussed in terms of changes of the cyclone activity responsible for the storm surge generation.